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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,665

06/27/2006

Toshiyuki Ikeda

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24978 7590 05/11/2009

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EXAMINER

FISCHER, JUSTIN R

ART UNIT

PAPER NUMBER

1791

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/584,665	Applicant(s) IKEDA ET AL.	
	Examiner Justin R. Fischer	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-13 is/are rejected.
- 7) ☒ Claim(s) 2-4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>062606</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsihlas (WO 02/085648, of record). As best depicted in Figures 1 and 3, Tsihlas teaches a tire cavity resonance restricting device comprising a cross-sectional area changing member and an elastic fixing member. In particular, the assembly of Tsihlas can include blocks (cross-sectional area changing members) that are bonded to strips (elastic fixing member) in a spaced apart manner over the circumferential extent of the tire (Paragraph 29). Moreover, the embodiment depicted in Figure 3 (using the above noted method) would include four relatively large non-attachment portions and four significantly smaller attachment portions (those portions having blocks bonded thereto).

As to claim 9, any of the devices described by Tsihlas can be divided into thirty six circumferentially adjacent segments or portions (even those having four gaps and four ridges, for example). In such an instance, the maximum mass is going to be significantly smaller than 10 times the minimum mass. In particular, Tsihlas teaches that the gaps have a height that is preferably less than 50% of the height of the ridges (Paragraph 26)- such a disclosure suggests a maximum mass that is preferably at least

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2 times the minimum mass (since the length and width are the same in respective regions- only difference is height and mass is density times volume).

3. Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Tanno (JP 2003-226104, of record). As best depicted in Figures 1-3, Tanno teaches a device including an elastic fixing member 6 and a cross-sectional area changing member 5, wherein said member is discontinuous over the circumferential extent of said device and thus defines an attachment portion and a non-attachment portion. The reference further teaches the inclusion of mass adjusting elements or fastening bands 8 in said non-attachment portion.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5, 6, and 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yukawa (JP 2003-252003). As best depicted in Figures 1-8, Yukawa teaches a tire cavity resonance restricting device 5 having an annular cross-sectional area changing member (specifically Figures 7A-7C). It is further evident that the reference is directed to a plurality of embodiments in which the number of grooves/ridges 10A,10B (which define the “area changing” member) can be varied. Given the general disclosure of Yukawa, one of ordinary skill in the art at the time of the invention would have found it obvious to form the device of Yukawa with thirty-six equally sectioned regions. For

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example, said device can include 18 grooves and 18 ridges alternating in the circumferential direction of the tire, in which case said device would have a maximum mass in the regions where the ridges are present and a minimum mass in the regions where the grooves are present. Based on the inclusion of said grooves and ridges only at the inner surface of the device, one of ordinary skill in the art at the time of the invention would have expected the maximum mass to be less than 10 times the weight the minimum mass. It is emphasized that the maximum mass would be expected to be slightly greater than the minimum mass and well within the claimed range between 1 and 10 times the minimum mass.

Regarding claim 5, the embodiment depicted in Figure 6B includes holes 10A. Furthermore, the device of Yukawa is bonded to the inner tire surface with an adhesive or elastic fixing member. While the reference fails to expressly suggest using an adhesive "film" (seen to satisfy the claimed ring structure), it is extremely well known and conventional to use adhesive films in a wide variety of bonding applications and applicant has not provided a conclusive showing of unexpected results to establish a criticality for using a "ring". Lastly, it is noted that the term "elastic" does not define over the adhesive layer of Yukawa.

As to claim 10, the adhesive film detailed above can be viewed as a band made of resin.

With respect to claim 12, the device of Yukawa is formed of a sponge material (Abstract).

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6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanno.

As detailed above, the assembly of Tanno includes fastening bands or mass attachment elements. The reference further teaches that the density of the aforementioned cross-sectional area changing member is extremely low (porous material that reduces noise) (Paragraph 13). While the reference is silent as to the material used to form said fastening bands, one of ordinary skill in the art at the time of the invention would have found the claimed relationship obvious since the member 5 is formed of an extremely small density material (porous material) and the fastening bands are not described as being formed of such a porous material. One of ordinary skill in the art at the time of the invention would have formed the fastening bands from a wide variety of materials, such as a plastic material or a metallic material, and these material have a significantly greater density as compared to the porous material used to form the member 5.

Allowable Subject Matter

7. Claims 2-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Justin Fischer
/Justin R Fischer/
Primary Examiner, Art Unit 1791
May 7, 2009